

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
27 May 2004 (27.05.2004)

PCT

(10) International Publication Number
WO 2004/043442 A1

(51) International Patent Classification⁷: A61K 9/72,
38/00, 39/00, 38/44, 38/47

Yong-Hong [CN/CN]; Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences, Xi Bei Wan Haidian District, Beijing 100094 (CN).

(21) International Application Number:
PCT/GB2003/004836

(74) Agent: LORD, Hilton, David; Marks & Clerk, 57-60 Lincoln's Inn Fields, London WC2A 3LS (GB).

(22) International Filing Date:
10 November 2003 (10.11.2003)

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, BE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

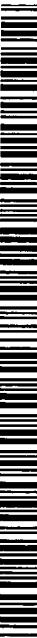
(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(30) Priority Data:
0226274.9 11 November 2002 (11.11.2002) GB

Published:

- with international search report
- with amended claims

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 2004/043442 A1

(54) Title: STABLE AEROSOL FORMULATION OF PEPTIDES AND PROTEIN WITH NON-CFC PROPELLANTS

(57) Abstract: Glycosidically stabilised macromolecules, such as proteins and peptides, have substantially greater stability in the presence of hydrofluoroalkane propellants for dispensing from metered dose inhalers, when formulated with polyhydroxylated polyalkenes such as PVA.